



US010588430B2

(12) **United States Patent**
McKeel et al.

(10) **Patent No.:** **US 10,588,430 B2**
(45) **Date of Patent:** **Mar. 17, 2020**

(54) **CLIP FOR SECURING ELONGATED LABEL TRACK AND ASSOCIATED SYSTEMS AND METHODS**

(71) Applicant: **Walmart Apollo, LLC**, Bentonville, AR (US)

(72) Inventors: **Robert Leslie Brock McKeel**, Rogers, AR (US); **Rhonda Meade**, Rogers, AR (US)

(73) Assignee: **Walmart Apollo, LLC**, Bentonville, AR (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/213,154**

(22) Filed: **Dec. 7, 2018**

(65) **Prior Publication Data**

US 2019/0104865 A1 Apr. 11, 2019

Related U.S. Application Data

(63) Continuation of application No. 15/411,240, filed on Jan. 20, 2017, now Pat. No. 10,182,668.

(60) Provisional application No. 62/286,076, filed on Jan. 22, 2016.

(51) **Int. Cl.**

A47F 5/00 (2006.01)
F16B 2/22 (2006.01)
G09F 3/16 (2006.01)
G09F 3/20 (2006.01)
F16M 13/02 (2006.01)

(52) **U.S. Cl.**

CPC **A47F 5/0068** (2013.01); **F16B 2/22** (2013.01); **F16M 13/022** (2013.01); **G09F 3/16** (2013.01); **G09F 3/204** (2013.01)

(58) **Field of Classification Search**

CPC **A47F 5/0068**; **F16B 2/22**; **G09F 3/204**; **G09F 3/16**; **F16M 13/022**

USPC **248/227.1-227.3**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,307,069 A 6/1919 Weismantel
1,417,325 A * 5/1922 Hopp G09F 3/20
40/658
3,089,211 A 5/1963 Perusse
3,248,765 A 5/1966 Achabal et al.

(Continued)

OTHER PUBLICATIONS

Absolute musueam & gallery products, Shelf Edge Label Holder, <http://us.absoluteproduct.com/shelf-edge-label-holder.html>, last viewed Nov. 16, 2015.

(Continued)

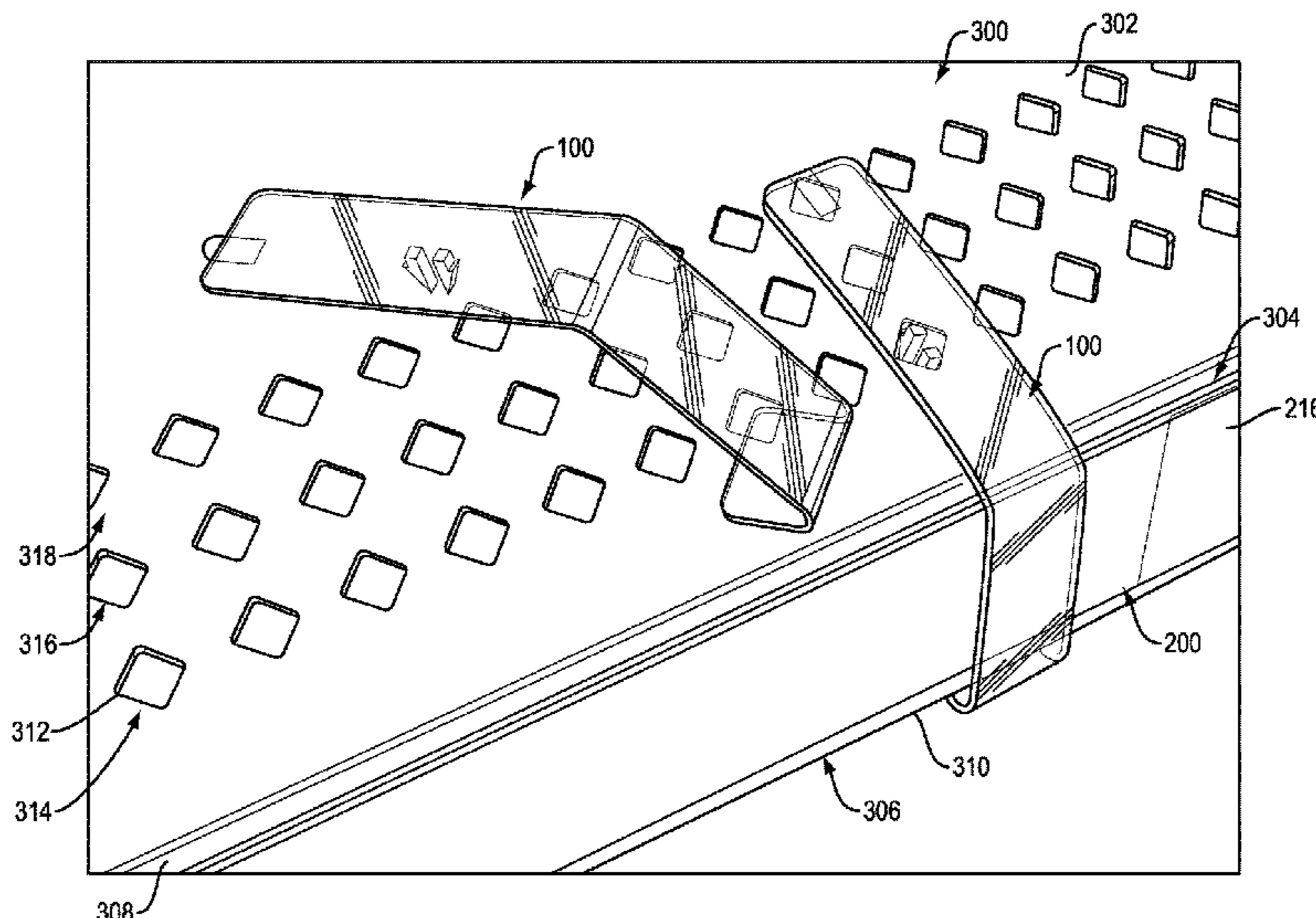
Primary Examiner — Ko H Chan

(74) *Attorney, Agent, or Firm* — McCarter & English, LLP; David R. Burns

(57) **ABSTRACT**

Exemplary embodiments are generally directed to clips and associated systems and methods for securing elongated label tracks. Exemplary embodiments include a top portion, an intermediate portion and a bottom portion. The top portion can be configured to secure to a top surface of a shelf or base deck. The intermediate portion can be configured to retain a portion of an elongated label track against a front face of the shelf or base deck. The bottom portion can be configured to engage a bottom surface of the shelf or base deck and support the elongated label track. The intermediate portion can extend at a first angle with respect to the top portion and a second angle with respect to the bottom portion.

8 Claims, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

3,688,915 A 9/1972 Ramsey
 3,746,295 A * 7/1973 Stepanek A47F 5/0068
 248/447.2
 4,032,101 A * 6/1977 Immordino A47B 96/06
 248/231.31
 4,312,295 A * 1/1982 Harrington A01K 1/0114
 119/167
 4,397,438 A 8/1983 Chapman
 4,606,280 A * 8/1986 Poulton A47F 5/0068
 108/152
 5,220,739 A * 6/1993 Chich G09F 13/04
 40/550
 5,473,833 A * 12/1995 Ostrovsky G09F 3/204
 40/5
 5,678,699 A * 10/1997 Gebka A47F 5/0068
 211/113
 5,887,731 A 3/1999 Thalenfeld
 5,913,270 A 6/1999 Price
 6,119,990 A * 9/2000 Kump A47F 5/0068
 211/57.1
 6,263,603 B1 7/2001 Wildrick
 6,289,618 B1 9/2001 Kump et al.
 6,354,546 B1 3/2002 Mueller
 6,622,410 B2 * 9/2003 Wilkes A47F 5/0068
 40/649
 7,011,462 B2 3/2006 Hanaoka
 7,839,521 B2 11/2010 Bard et al.
 D640,750 S 6/2011 Bird et al.
 8,333,285 B2 12/2012 Kiehnau et al.
 8,767,241 B2 7/2014 Pan et al.
 8,832,340 B2 9/2014 Miyachi et al.
 10,202,995 B2 * 2/2019 Stickelberger F16B 2/22
 2003/0098400 A1 5/2003 Fast et al.
 2004/0050812 A1 * 3/2004 Rojas A47F 5/0068
 211/134
 2004/0237369 A1 * 12/2004 Andersson A47F 5/0068
 40/661.03
 2006/0075670 A1 * 4/2006 Brinkman G09F 3/204
 40/666
 2007/0044361 A1 3/2007 Gormley et al.
 2007/0245611 A1 * 10/2007 McDonald G09F 3/204
 40/661.03

2007/0268710 A1 * 11/2007 Skiba G02B 6/0091
 362/396
 2008/0141575 A1 6/2008 Keating
 2009/0056185 A1 3/2009 Wamsley
 2013/0032560 A1 * 2/2013 Gregory A47B 43/006
 211/153
 2013/0061500 A1 3/2013 Bird et al.
 2013/0135665 A1 5/2013 Griffith et al.
 2016/0133165 A1 * 5/2016 Joliey G09F 3/204
 40/5

OTHER PUBLICATIONS

Alibaba Group, POP top clip data strip wood shelf clip label sign holder strip, <http://www.aliexpress.com/item/POP-top-clip-data-strip-glass-wood-shelf-clip-label-sign-holder-strip/1856841286.html>, last viewed Nov. 16, 2015.
 TP Extrusions.com, Plastic ticket strips with clear cover flap for epos applications, <https://www.tpextrusions.com/plastic-label-holders-flat-epos.html>, last viewed Nov. 16, 2015.
 Southern Imperial, Shelf Edge Dragon Clip, <http://www.southernimperial.com/shelf-edge-dragonclip-p-5097.html>, last viewed Nov. 16, 2015.
 www.holders.com, Self-Piercing Flag Sign Holder, <http://www.holders.com.mx/clips-y-portaprecios/41-self-piercing-flag-sign-holder>, last viewed Nov. 16, 2015.
 U.S. Appl. No. 15/411,240, filed Jan. 20, 2017, Robert Leslie Brock McKeel et al.
 www.holders.com, Self-Piercing Flag Sign Holder, <http://www.holders.com.mx/chps-y-portaprecios/41-self-piercing-flag-sign-holder>, last viewed Nov. 16, 2015.
 Breezy, Secure Cloud Printing Architecture, available at <http://www.breezy.com/architecture/secure-cloud-printing-architecture.html>, last viewed Jan. 5, 2016.
 Papercut, Google Cloud Print, Centralize Cloud Print Management, available at <http://www.papercut.com/tour/google-cloud-print/>, last viewed Jan. 5, 2016.
 Hewlett-Packard Development Company, L.P., Boost Your Business, Become a Public Print Location, available at <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA1-9346ENW.pdf>, last viewed Jan. 5, 2016.

* cited by examiner

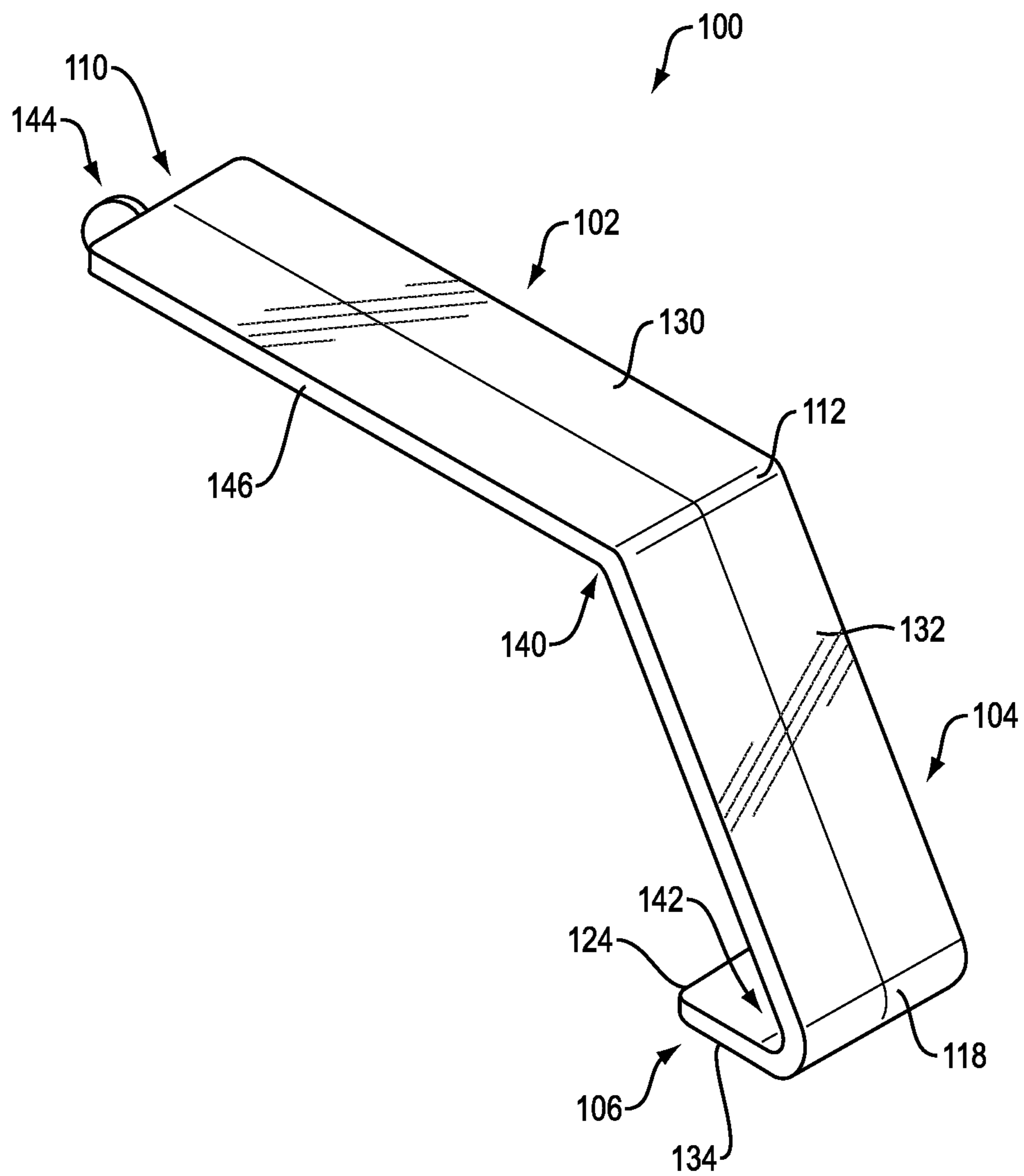


FIG. 1

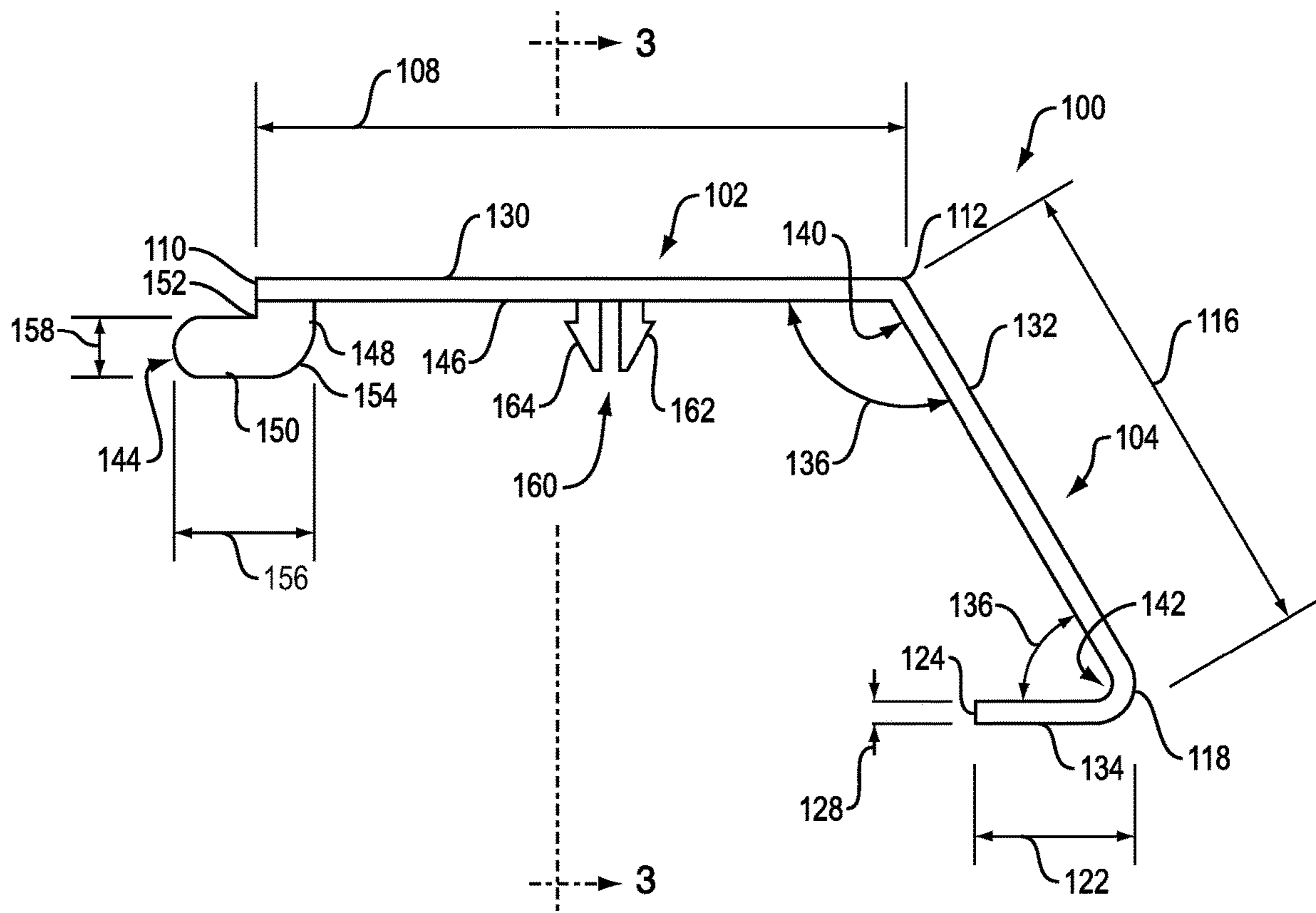


FIG. 2

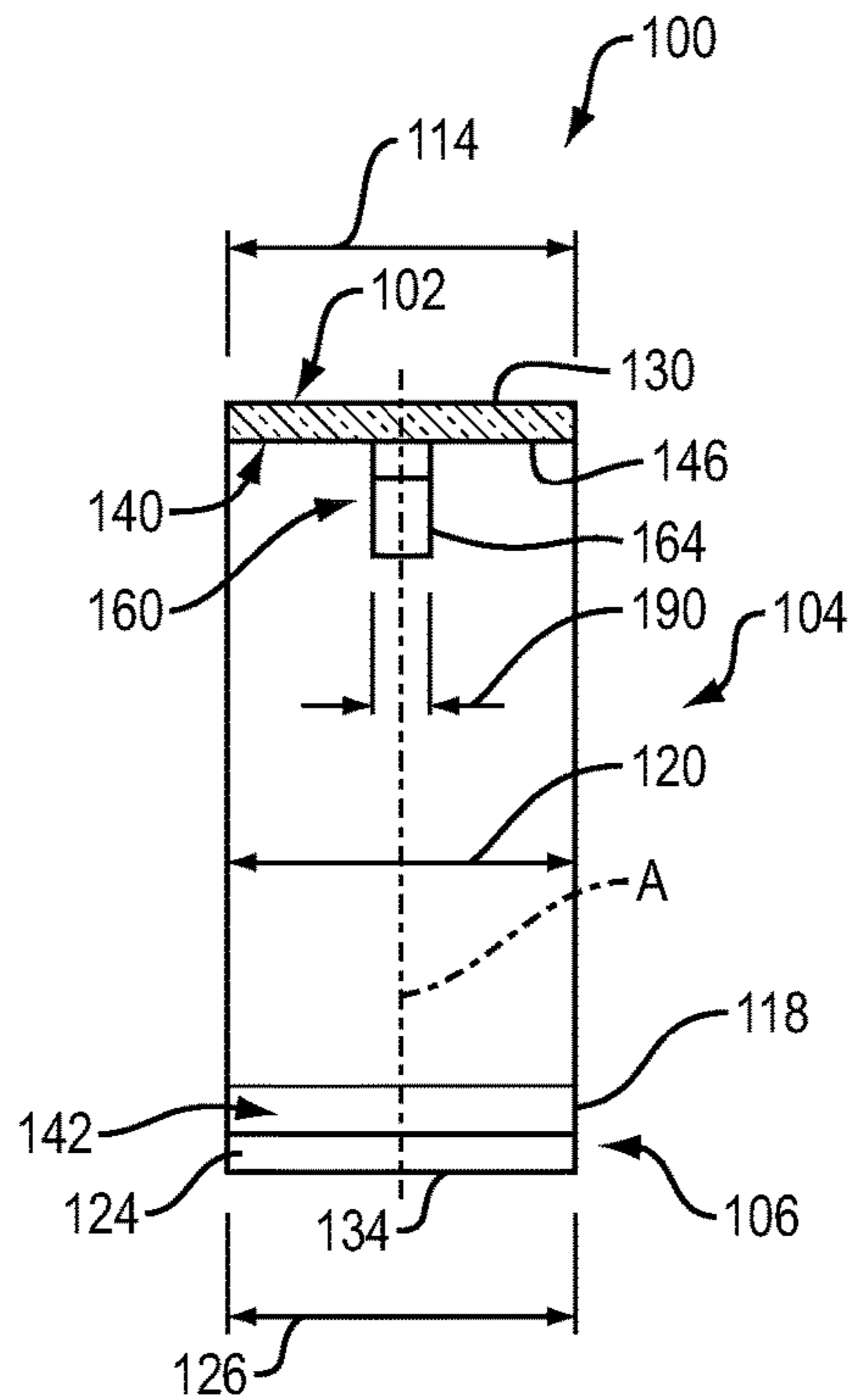


FIG. 3

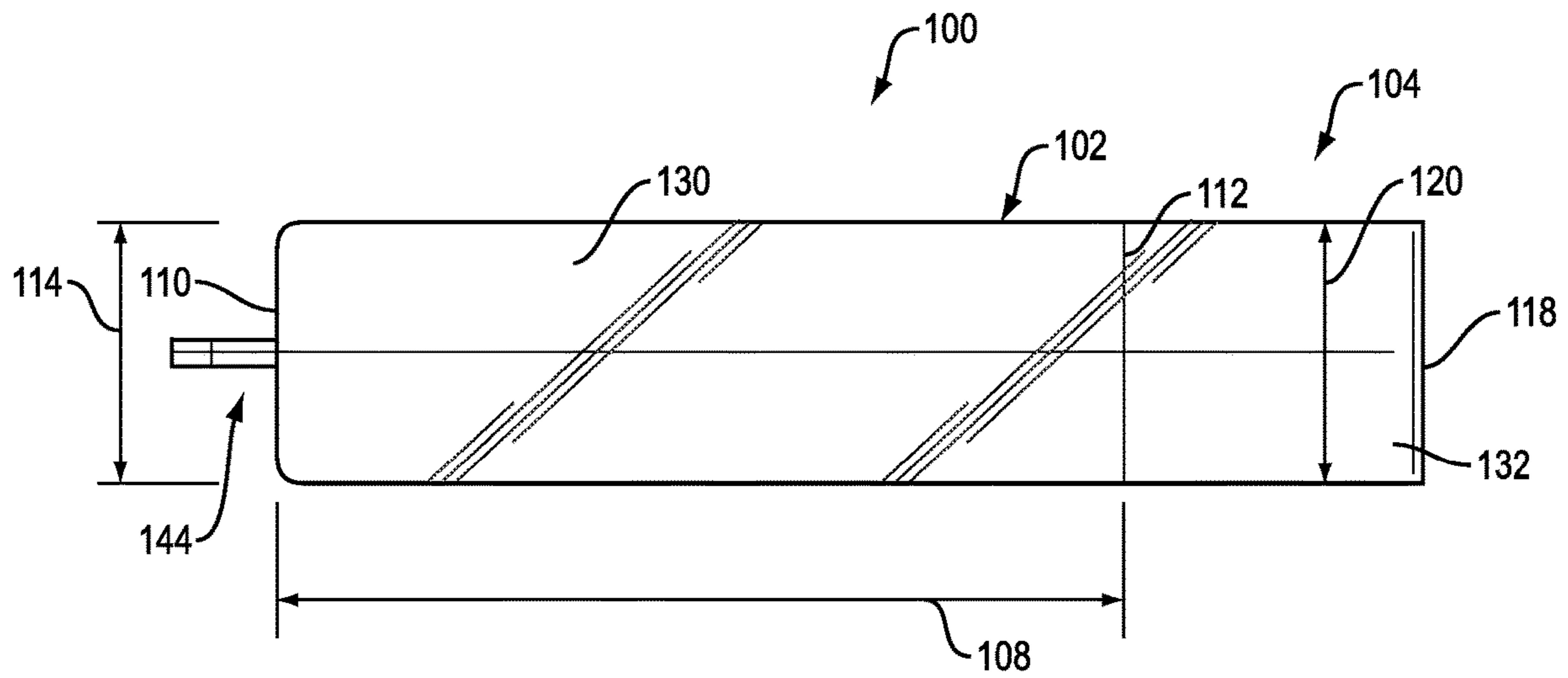


FIG. 4

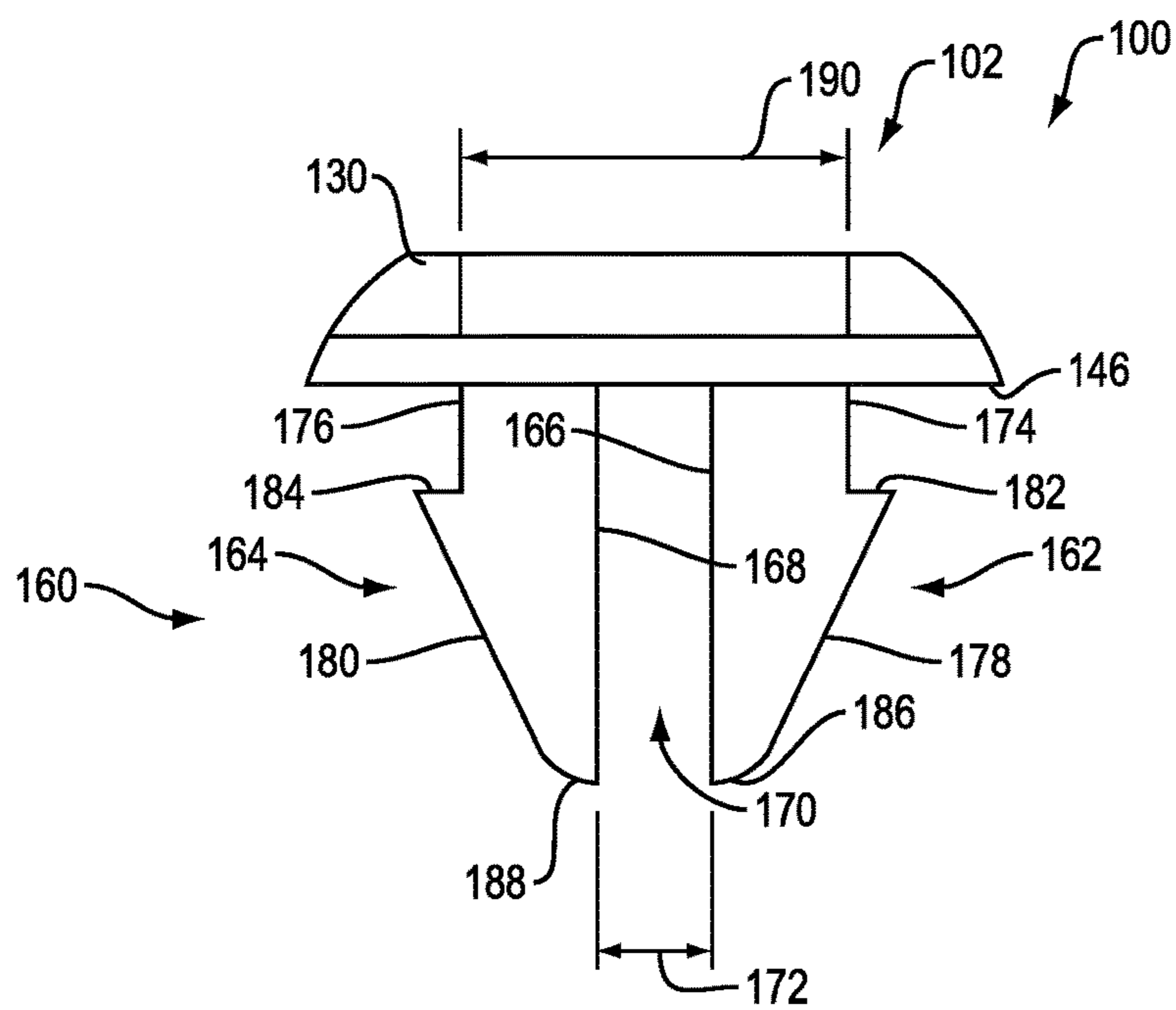


FIG. 5

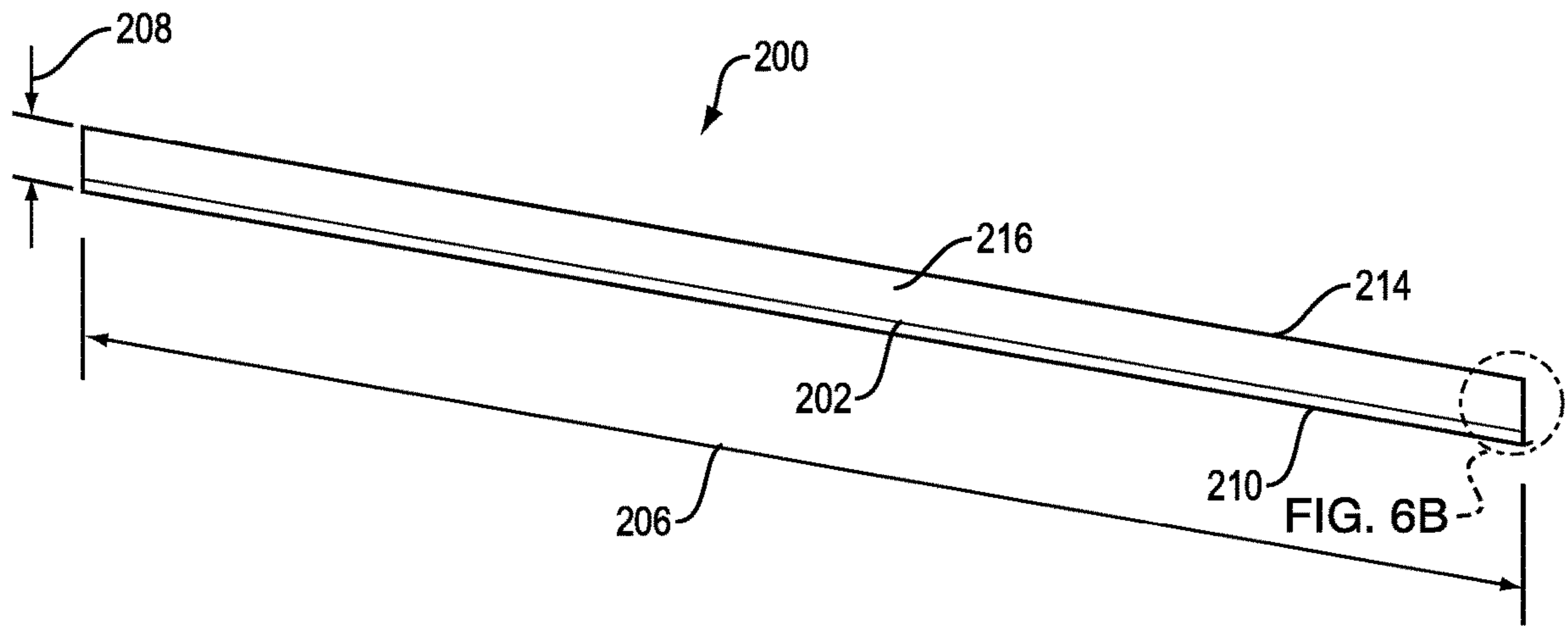


FIG. 6A

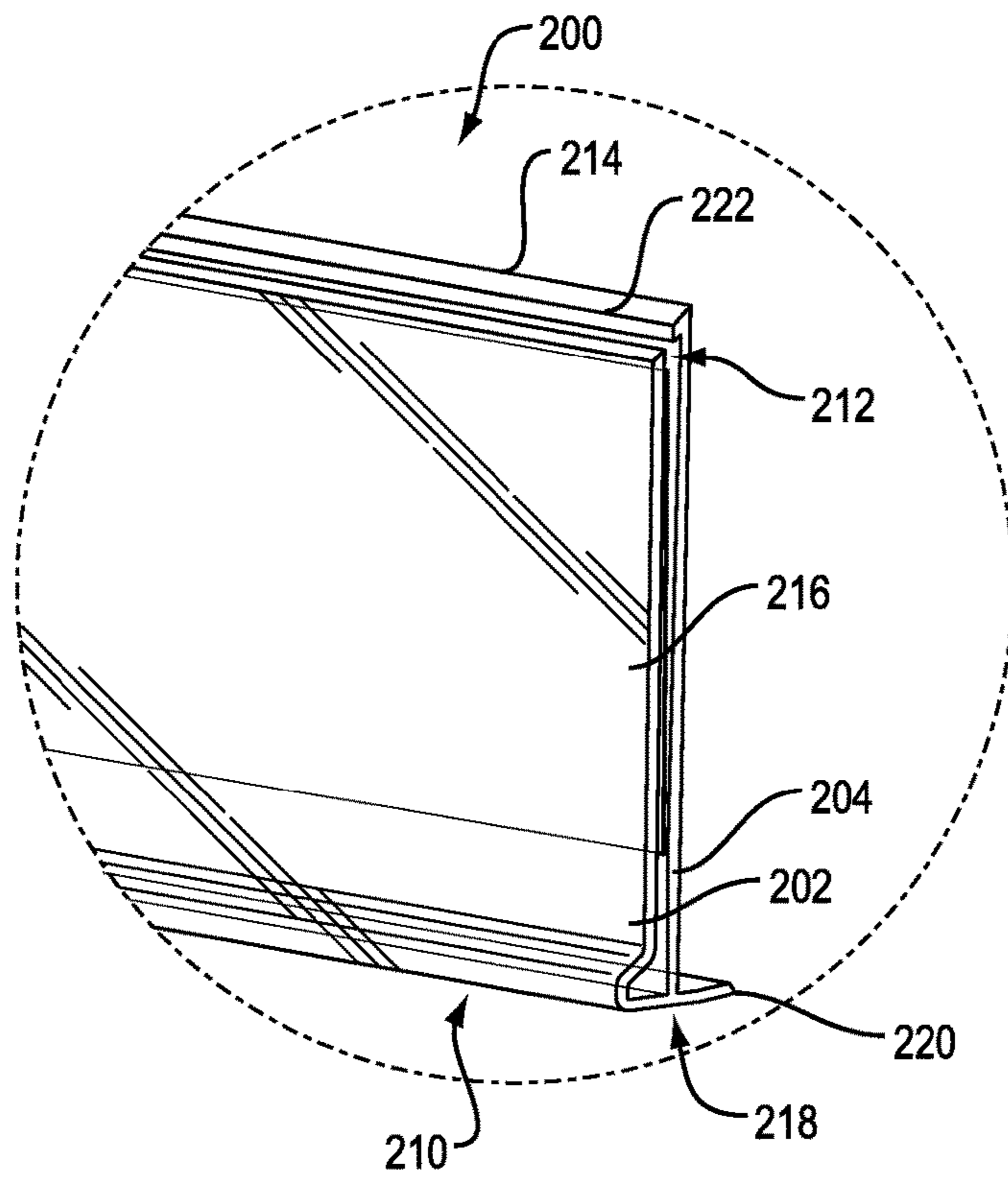


FIG. 6B

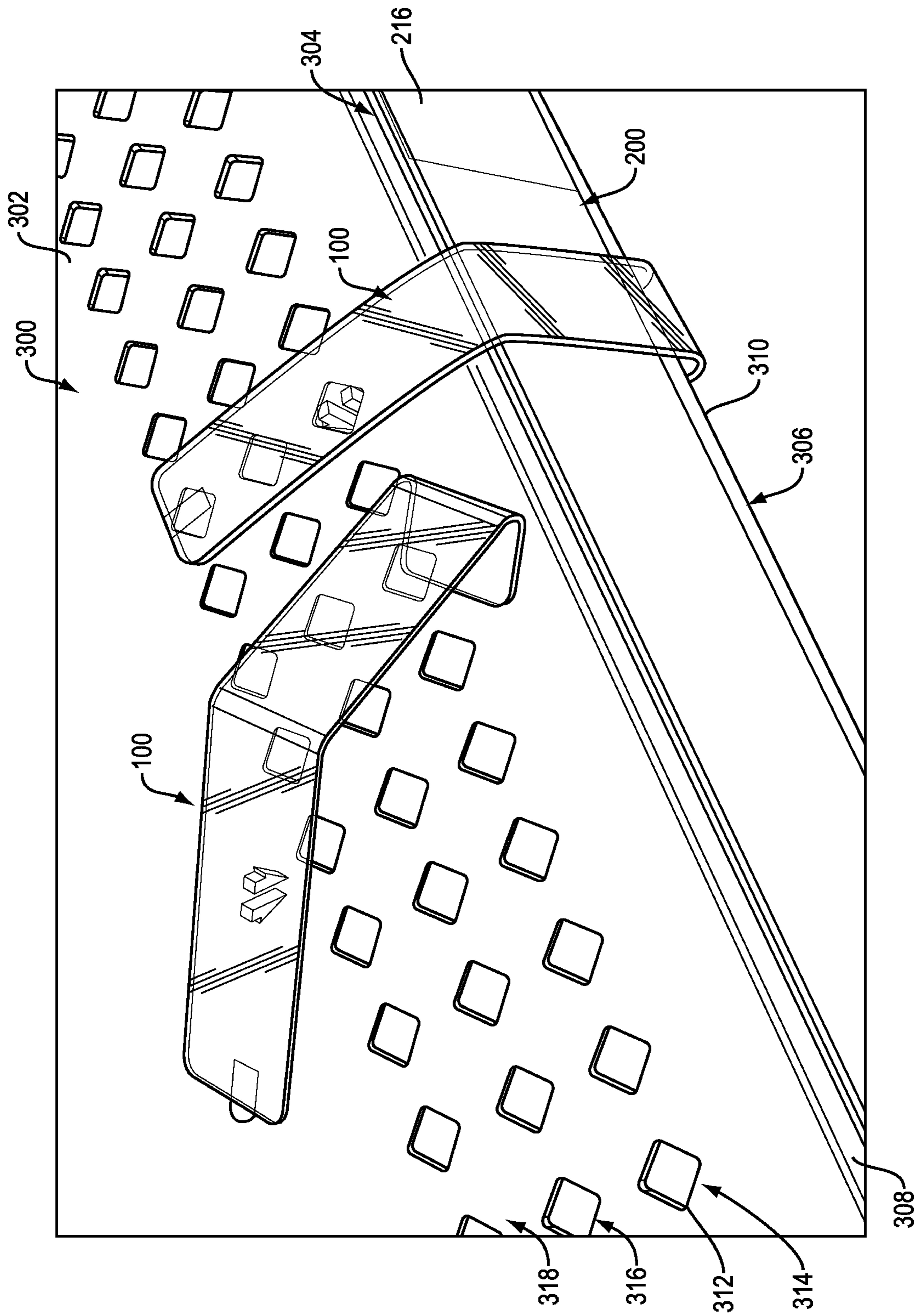


FIG. 7

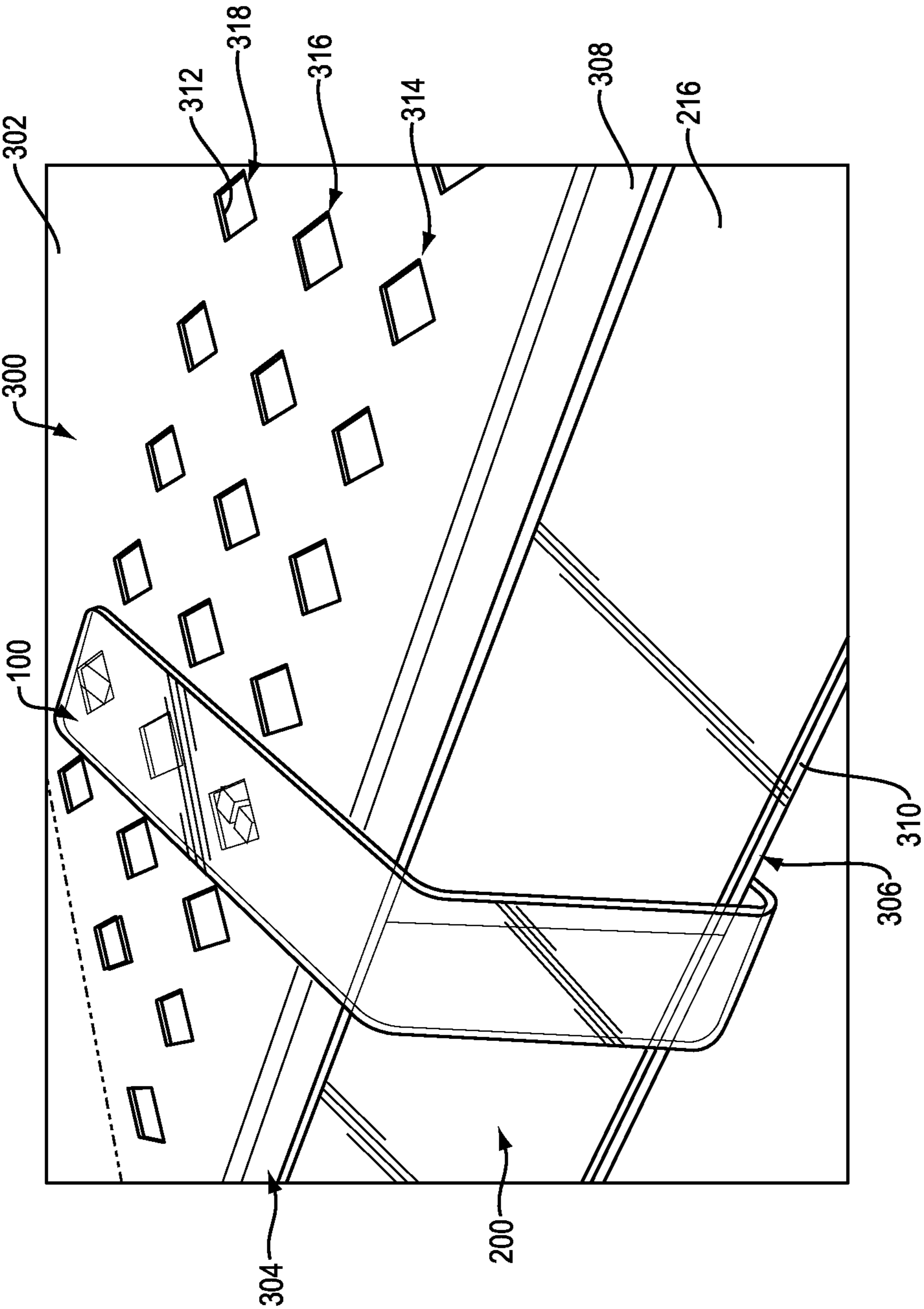


FIG. 8

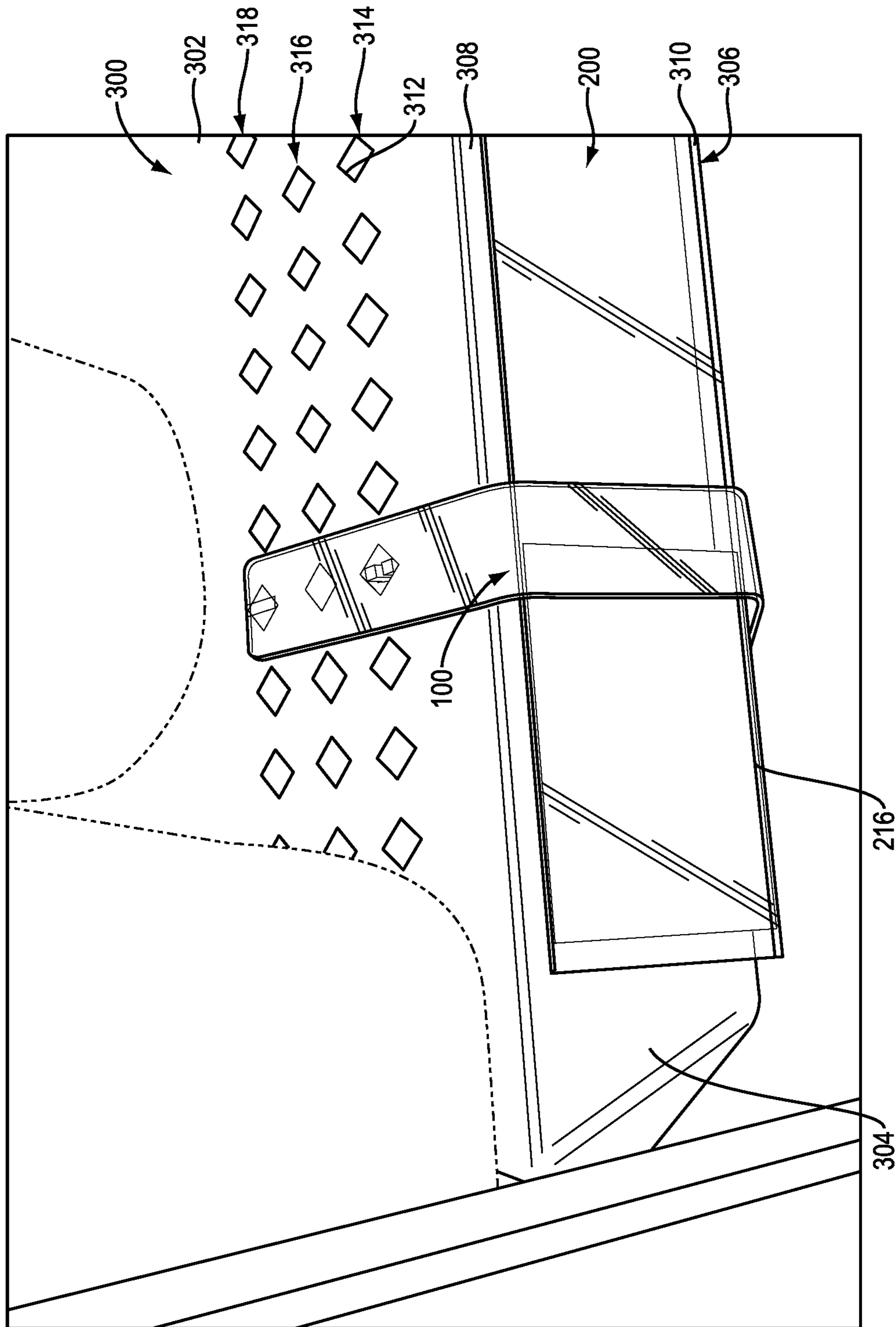


FIG. 9

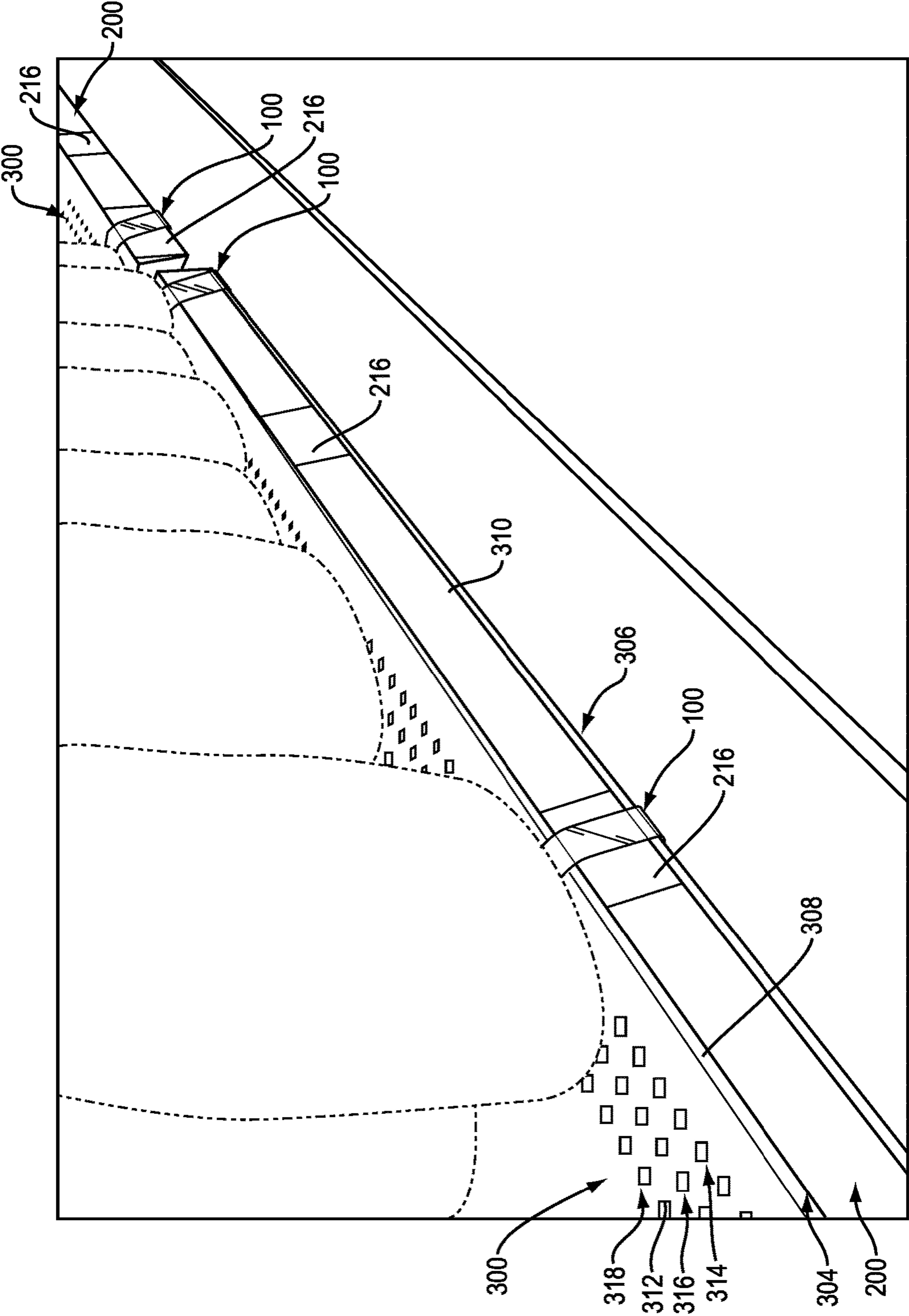


FIG. 10

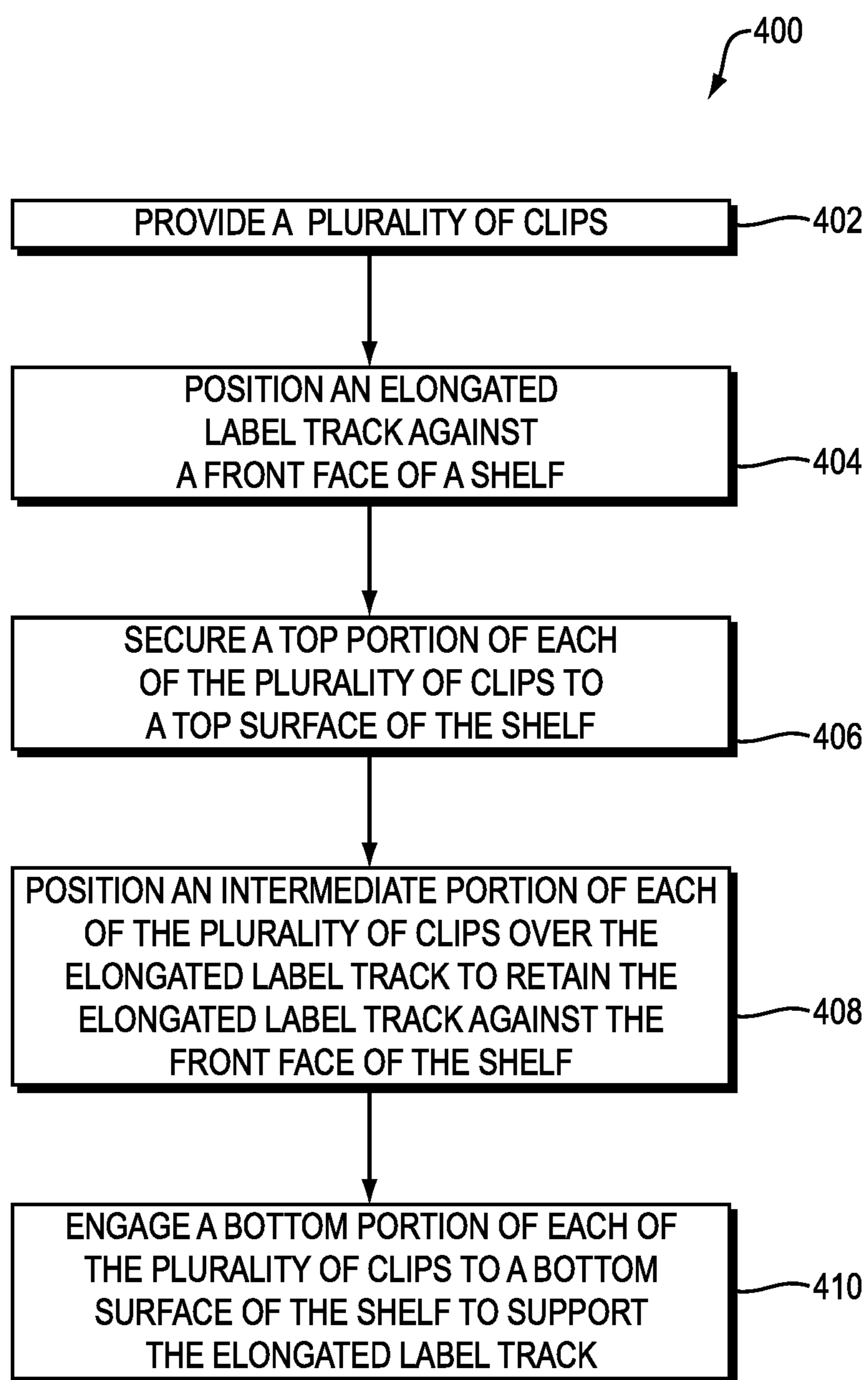


FIG. 11

1

CLIP FOR SECURING ELONGATED LABEL TRACK AND ASSOCIATED SYSTEMS AND METHODS

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation application that claims the benefit of co-pending U.S. Non-Provisional patent application Ser. No. 15/411,240, which was filed on Jan. 20, 2017, which claims the benefit of commonly assigned U.S. Provisional Patent Application No. 62/286,076, which was filed on Jan. 22, 2016. The entire contents of the foregoing patent applications are incorporated herein by reference.

BACKGROUND

Retail establishments generally use shelves or base decks for displaying products to be purchased by customers. The shelves or base decks typically include a front face onto which labels including, for example, a product name, price, associated barcode, or the like, are affixed. Some retail establishments utilize label tracks formed as strips of plastic that can accommodate multiple labels across a length of a shelf, and the label track itself is affixed to the front face of the shelf. Corresponding products are positioned on the shelf above or below the appropriate label such that customers can conveniently visualize the price of the product to be purchased.

In a typical application, the label or label track can be secured to the front face of the shelf or base deck with adhesive. Due to a lack of sufficient adhesive, damage to the surface of the front face of the shelf or base deck, an unprepared front face surface, and/or a textured front face surface, the label or label track can become separated from the shelf or base deck, resulting in labels or label tracks that fall to the floor. Labels or label tracks can thereby be lost or damaged and products on the shelf or base deck can remain without the essential information needed by customers during shopping. Determining which products require new labels and replacement of such labels can be time consuming, increasing the costs associated with managing the retail establishment.

SUMMARY

Exemplary embodiments of the present disclosure overcome disadvantages of conventional systems and methods of affixing labels to shelves by providing for clips that advantageously engage the top, front and bottom surfaces of the shelf to secure an elongated label track against the front face of the shelf. Although discussed herein with respect to implementation on a shelf, it should be understood that the exemplary embodiments can be implemented in a substantially similar manner with base decks and that the terms “shelf” and “base deck” are used interchangeably herein. In accordance with embodiments of the present disclosure, an exemplary clip for securing an elongated label track to a shelf is provided. The shelf can include a top surface, a front face and a bottom surface. The clip can include a top portion, an intermediate portion and a bottom portion.

The top portion can have a first length extending from a first terminal end to a first transition portion. The top portion can be configured to secure to the top surface of the shelf. The intermediate portion can have a second length extending from the first transition portion to a second transition portion. The intermediate portion can be configured to retain a

2

portion of an elongated label track against the front face of the shelf. The bottom portion can have a third length extending from the second transition portion to a second terminal end. The bottom portion can be configured to engage the bottom surface of the shelf and support the elongated label track. Engagement of the top, intermediate and bottom portions of the clip with the shelf advantageously maintains the elongated label track affixed to the shelf, thereby preventing the elongated label track from becoming separated from the shelf during use. The intermediate portion can extend at a first angle with respect to the top portion and a second angle with respect to the bottom portion.

In some embodiments, the first terminal end of the top portion can include a first locking mechanism. In some embodiments, the first locking mechanism can include a protrusion extending from a bottom surface of the top portion in a direction away from the intermediate portion. The protrusion can define a substantially hook-shaped or L-shaped configuration configured to be positioned within an aperture formed in the top surface of the shelf.

In some embodiments, the top portion can include a second locking mechanism disposed between the first terminal end and the first transition portion of the top portion. In some embodiments, the second locking mechanism can include two separated protrusions extending substantially perpendicularly away from the bottom surface of the top portion. The two separated protrusions can be configured to snap fit within a single aperture formed in the top surface of the shelf.

The bottom portion can extend substantially parallel to the top portion. In some embodiments, the bottom portion can be configured to snap around the bottom surface of the shelf to secure the bottom portion to the shelf. The first angle of the intermediate portion relative to the top portion and the second angle of the intermediate portion relative to the bottom portion can be different. In some embodiments, the first angle between the intermediate portion and the top portion can form an interior angle that is an obtuse angle. In some embodiments, the second angle between the intermediate portion and the bottom portion can form an interior angle that is an acute angle.

In some embodiments, the first transition portion can define a sharp corner. In some embodiments, the second transition portion can define a rounded corner with a radius. In some embodiments, the first length of the top portion can be dimensioned greater than the second length of the intermediate portion. In some embodiments, the second length of the intermediate portion can be dimensioned greater than the third length of the bottom portion.

In accordance with embodiments of the present disclosure, an exemplary system for securing an elongated label track to a shelf is provided. The system can include a shelf, an elongated label track, and clips. The shelf can include a top surface, a front face and a bottom surface. The elongated label track can be configured to be positioned against the front face of the shelf. The elongated label track can have a track length and a track width. The track length can be at least ten times the track width. Each of the clips can be as described herein. When the clips are secured to the shelf, the intermediate portion of each of the clips can be configured to retain the elongated label track against the front face of the shelf.

The shelf can include two rows of apertures formed in the top surface. The two rows of apertures can extend substantially parallel to the front surface of the shelf. In some embodiments, the first terminal end of the top portion of

each of the clips can include a first locking mechanism configured to be positioned within an aperture of a first row of the two rows of apertures formed in the shelf. In some embodiments, each of the clips can include a second locking mechanism disposed between the first terminal end and the transition portion. The second locking mechanism can be configured to snap fit within an aperture of a second row of the two rows of apertures formed in the shelf to secure the clip to the shelf. In some embodiments, the elongated label track can include two plastic sheets connected relative to each other at a first edge extending the track length and defining an opening along a second edge extending the track length.

In accordance with embodiments of the present disclosure, an exemplary method of securing an elongated label track to a shelf is provided. The shelf can include a top surface, a front face and a bottom surface. The method can include providing clips. Each of the clips can be as described herein. The method can include positioning an elongated label track against a front face of the shelf. The method can include securing the top portion of each of the clips to a top surface of the shelf. The method can include positioning the intermediate portion of each of the clips over the elongated label track to retain the elongated label track against the front face of the shelf. The method can include engaging the bottom portion of each of the clips to a bottom surface of the shelf to support the elongated label track.

Any combination and/or permutation of embodiments is envisioned. Other objects and features will become apparent from the following detailed description considered in conjunction with the accompanying drawings. It is to be understood, however, that the drawings are designed as an illustration only and not as a definition of the limits of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

To assist those of skill in the art in making and using the disclosed clips and associated systems and methods, reference is made to the accompanying figures, wherein:

FIG. 1 is a perspective view of an exemplary clip in accordance with embodiments of the present disclosure.

FIG. 2 is a side view of an exemplary clip of FIG. 1.

FIG. 3 is a cross-sectional view of an exemplary clip of FIG. 1 along section 3-3 of FIG. 2.

FIG. 4 is a top view of an exemplary clip of FIG. 1.

FIG. 5 is a detailed view of an exemplary clip of FIG. 1.

FIGS. 6A and 6B are perspective and detailed view of an exemplary elongated label track in accordance with embodiments of the present disclosure.

FIG. 7 is a perspective view of an exemplary assembly of a shelf, an elongated label track and a clip in accordance with embodiments of the present disclosure.

FIG. 8 is a perspective view of an exemplary assembly of a shelf, an elongated label track and a clip in accordance with embodiments of the present disclosure.

FIG. 9 is a perspective view of an exemplary assembly of a shelf, an elongated label track and a clip in accordance with embodiments of the present disclosure.

FIG. 10 is a perspective view of exemplary assemblies of shelves, elongated label tracks and clips in accordance with embodiments of the present disclosure.

FIG. 11 is a flowchart illustrating an implementation of an exemplary clip in accordance with embodiments of the present disclosure.

DETAILED DESCRIPTION

Exemplary embodiments of the present disclosure overcome the disadvantages of conventional systems and meth-

ods of affixing labels to shelves by providing for clips that advantageously engage the top, front and bottom surfaces of the shelf to secure an elongated label track against the front face of the shelf. FIGS. 1-5 show perspective, side, cross-sectional, top and detailed views, respectively, of an exemplary clip 100. The clip 100 can be formed from a plastic material that is capable of being molded and, once set, provides sufficient flexibility for engaging the clip 100 with a shelf while further providing sufficient stiffness to secure a label track to the shelf. The clip 100 includes a top portion 102, an intermediate portion 104 and a bottom portion 106.

The top portion 102 defines a length 108 (e.g., a first length) extending from a first terminal end 110 of the clip 100 to a first transition portion 112. In some embodiments, the length 108 can be dimensioned as approximately 1 inch to approximately 2 inches. The first terminal end 110 can define a distal end of the top portion 102 and the first transition portion 112 can define a proximal end of the top portion 102. The first terminal end 110 and the first transition portion 112 are located on opposing sides of the length 108 of the top portion 108. The top portion 108 defines a width 114 that can be substantially uniform along the entire length 108 of the top portion 108. In some embodiments, the width 114 can be dimensioned as approximately 0.4 inches to approximately 0.8 inches.

The intermediate portion 104 defines a length 116 (e.g., a second length). The length 116 can extend from the first transition portion 112 (e.g., a distal end of the intermediate portion 104) to a second transition portion 118 (e.g., a proximal end of the intermediate portion 104). The first transition portion 112 and the second transition portion 118 are located on opposing sides of the length 116 of the intermediate portion 104. The intermediate portion 104 defines a width 120 that can be dimensioned substantially similarly to the width 114 of the top portion 108.

The bottom portion 106 defines a length 122 (e.g., a third length) extending from the second transition portion 118 (e.g., a distal end of the bottom portion 106) to a second terminal end 124 (e.g., a proximal end of the bottom portion 106) of the clip 100. In some embodiments, the length 122 can be dimensioned as approximately 0.4 inches to approximately 0.8 inches. Thus, the length 108 of the top portion 102 can be dimensioned greater than the lengths 116 and 122 of the intermediate portion 104 and the bottom portion 106, respectively, and the length 116 of the intermediate portion 104 can be dimensioned greater than the length 122 of the bottom portion 106. The bottom portion 106 defines a width 126 that can be dimensioned substantially similarly to the width 114, 120 of the top portion 108 and the intermediate portion 104, respectively. The top, intermediate and bottom portions 102, 104, 106 can define the same thickness 128 that can be dimensioned as approximately 0.04 inches to approximately 0.08 inches. As shown in the cross-sectional view of FIG. 3, the top, intermediate and bottom portions 102, 104, 106 of the clip 100 can be substantially aligned along a central vertical axis A.

The top portion 102 and the intermediate portion 104 can be connected or extend relative to each other at the first transition portion 112. The intermediate portion 104 and the bottom portion 106 can be connected or extend relative to each other at the second transition portion 118. The transitions between the top, intermediate and bottom portions 102, 104, 106 can be substantially smooth and uniform, thereby forming a single unitary structure for the body of the clip 100. In some embodiments, the top, intermediate and bottom portions 102, 104, 106 can be connected or extend relative to each other such that the top portion 102 extends substan-

tially parallel to the bottom portion **106**, and the intermediate portion extends a first angle with respect to the top portion **102** and a second angle with respect to the bottom portion, as described herein.

A top surface **130** of the top portion **102** can define a (first) plane, the top surface **132** of the intermediate portion **104** can define a (second) plane that is angled relative to and intersects the (first) plane of the top portion **102**, and the top surface **134** of the bottom portion **106** can define a (third) plane that is substantially parallel to the (first) plane of the top portion **102** and angled relative to the (second) plane of the intermediate portion **104**. In some embodiments, an (interior) angle **136** formed at the connection of the top portion **102** and the intermediate portion **104** at the first transition portion **112** (e.g., the angle **136** between the plane defined by the top portion **102** and the plane defined by the intermediate portion **104**) can be obtuse. In some embodiments, the angle **136** can be dimensioned as approximately 120° or between a range of approximately 100° to approximately 140° . In some embodiments, an (interior) angle **138** formed at the connection of the intermediate portion **104** and the bottom portion **106** at the second transition portion **118** (e.g., the angle **138** between the plane defined by the intermediate portion **104** and the plane defined by the bottom portion **106**) can be acute. In some embodiments, the angle **138** can be dimensioned as approximately 60° or between a range of approximately 40° to approximately 80° . Thus, the intermediate portion **104** can be oriented in a non-perpendicular manner relative to the top and bottom portions **102**, **106**.

In some embodiments, the connection of the top portion **102** and the intermediate portion **104** at the first transition portion **112** can form a sharp/pointed corner **140**. In particular, the sharp corner **140** can define a minimal radius for manufacturing (e.g., a radius of 0 inches). In some embodiments, the connection of the intermediate portion **104** and the bottom portion **106** at the second transition portion **118** can form a rounded/bullnose corner **142**. In particular, the rounded corner **142** can include a chamfer with a radius of approximately 0.06 inches or a range of approximately 0.04 to approximately 0.08 inches. In some embodiments, the rounded corner **142** provides for an improved fit of the clip **100** relative to the shelf.

In some embodiments, the top portion **102** can include a locking mechanism **144** (e.g., a first locking mechanism) disposed at or near the first terminal end **110**. The locking mechanism **144** can be positioned substantially centrally relative to the width **114** of the top portion **102** and can be aligned with the central vertical axis A. The locking mechanism **144** can be in the form of an L-shaped or hook-shaped protrusion extending from a bottom surface **146**. In particular, the locking mechanism **144** can include a vertical extension **148** extending substantially perpendicularly from the bottom surface **146** of the top portion **102**, and further includes a horizontal extension **150** extending substantially perpendicularly from the vertical extension **148** in a direction way from the intermediate portion **104**. In some embodiments, an inner corner **152** at the connection of the vertical and horizontal extensions **148**, **150** can be substantially sharp (e.g., a radius of zero inches).

In some embodiments, an outer corner **154** at the connection of the vertical and horizontal extensions **148**, **150** can be substantially rounded (e.g., a radius greater than zero inches). As will be discussed in greater detail below, the sharp and rounded corners of the locking mechanism **144** can assist with engagement of the locking mechanism **144** with apertures formed in the top surface of the shelf. In some

embodiments, a length **156** defined by the locking mechanism **144** can be dimensioned as approximately 0.4 inches or a range of approximately 0.3 inches to approximately 0.5 inches. In some embodiments, a width **158** of the horizontal extension **150** of the locking mechanism **144** can be dimensioned as approximately 0.2 inches or a range of approximately 0.1 inches to approximately 0.3 inches.

In some embodiments, the top portion **102** can include a locking mechanism **160** (e.g., a second locking mechanism) disposed between the first terminal end **110** and the first transition portion **112** of the top portion **102**. The locking mechanism **160** can be positioned substantially centrally relative to the width **114** of the top portion **102** and can be aligned with the central vertical axis A. The locking mechanism **160** can be in the form of two separated protrusions **162**, **164** extending substantially perpendicularly away from the bottom surface **146** of the top portion **102**. The inner surfaces **166**, **168** of the protrusions **162**, **164** facing each other can be substantially planar, thereby forming a uniform channel **170** between the inner surfaces **166**, **168** of the protrusions **162**, **164**. In some embodiments, a width **172** of the channel **170** can be dimensioned as approximately 0.06 inches or a range of approximately 0.04 to approximately 0.08 inches.

The outer surface of each protrusion **162**, **164** facing away from each other can include a narrow extension **174**, **176** connected to the bottom surface **146** and a head portion **178**, **180** at a distal end of the narrow extension **174**, **176**. The transition or connection between the narrow extension **174**, **176** and the head portion **178**, **180** can include a protruding edge **182**, **184**. Each head portion **178**, **180** can include a distal end forming an insertion point **186**, **188**. In some embodiments, the insertion point **186**, **188** can define a sharp corner or connection between the inner surface **166**, **168** and the head portion **178**, **180**. In some embodiments, as shown in FIG. 5, the insertion point **186**, **188** can define a rounded corner or connection between the inner surface **166**, **168** and the head portion **178**, **180** (e.g., a radius greater than zero inches, such as, for example, approximately 0.030 inches). In some embodiments, the width **190** of each of the protrusions **162**, **164** can be dimensioned as approximately 0.1 inches or a range of approximately 0.05 inches to approximately 0.15 inches.

As will be discussed in greater detail below, the material of fabrication of the locking mechanism **160** can be formed such that the protrusions **162**, **164** can be snap fit into an aperture formed in the top surface of the shelf. In particular, the protrusions **162**, **164** can flex towards each other to reduce the width **172** of the channel **170** during insertion of the locking mechanism **160** into the aperture and, upon insertion into the aperture, the protrusions **162**, **164** can expand to the natural position with the uniform width **172** such that the protruding edges **182**, **184** prevent removal of the locking mechanism **160** from the aperture.

With reference to FIGS. 6A and 6B, perspective and detailed views of an exemplary elongated label track **200** are provided. The label track **200** can be formed from two sheets portions (e.g., a first sheet **202** and a second sheet **204**). In some embodiments, the first sheet **202** can define a front side of the label track **200** (e.g., the side facing away from a shelf face when the track is mounted on the shelf face) and the second sheet **204** can define a rear side of the label track **200** (e.g., the side facing towards a shelf face when the track is mounted on the shelf face). In some embodiments, the first and second sheets **202**, **204** can integrally or separately be fabricated from a plastic material. In some embodiments, the first sheet **202** can be substantially transparent or partially

transparent, and the second sheet **202** can be opaque. In some embodiments, both the first and second sheets **202**, **204** can be substantially transparent or partially transparent.

The label track **200** defines a length **206** and a width **208**. In some embodiments, the length **206** of the label track **200** can be dimensioned at least ten times the dimension of the width **208**. In some embodiments, the length **206** can be dimensioned as approximately 46 inches or a range of approximate 12 inches to approximately 82 inches. The first and second sheets **202**, **204** can be connected or joined relative to each other along a first edge **210** extending the length **206** of the label track **200**. The label track **200** can include an opening **212** between the first and second sheets **202**, **204** along a second edge **214** extending the length **206** of the label track **200**. The first and second edges **210**, **214** can be disposed on opposing sides of the width **208** of the label track **200**.

The opening **212** allows the first and second sheets **202**, **204** to be separated relative to each other to increase the width of the opening **212** such that one or more labels **216** can be inserted between the first and second sheets **202**, **204**. After insertion of the label **216**, the first and second sheets **202**, **204** can spring back to the normal position, e.g., the first and second sheets **202**, **204** being positioned substantially against each other. One or more labels **216** can thereby be “sandwiched” between the first and second sheets **202**, **204**.

The vertical extension of the first and second sheets **202**, **204** of the label track **200** can define a vertical plane. In some embodiments, the first edge **210** of the label track **200** can include a protrusion **218** extending the length **206** of the label track **200**. The protrusion **218** can extend substantially perpendicularly to the vertical plane defined by the first and second sheets **202**, **204**. In some embodiments, a rear edge **220** of the protrusion **218** can be configured and dimensioned to be positioned against the bottom surface of the shelf to prevent or reduce undesired movement of the label track **200** relative to the shelf.

In some embodiments, the second sheet **204** can include a protrusion **222** extending perpendicularly from the second edge **214**. The protrusion **222** can be configured and dimensioned to cover or overlap the opening **212** between the first and second sheets **202**, **204**. Thus, if the label **216** slides upward and through the opening **212** between the first and second sheets **202**, **204**, the protrusion **222** can prevent the label **216** from sliding completely out of the label track **200**. The label **216** can thereby be maintained in a “sandwiched” configuration within the label track **200**.

With reference to FIGS. 7-10, perspective views of assemblies of a shelf **300**, an elongated label track **200** and clips **100** (e.g., a system) are provided. The shelf **300** can include a top surface **302**, a front face **304** and a bottom surface **306**. The top surface **302** can be connected to the front face **304** along a first edge **308**. The front face **304** can be connected to the bottom surface **306** along a second edge **310**. In some embodiments, one or both of the first and second edges **308**, **310** can define a rounded corner (e.g., a corner defining a radius greater than zero inches). In some embodiments, the top surface **302** and the bottom surface **306** can extend substantially parallel relative to each other. In some embodiments, rather than including a bottom surface **306**, the shelf **300** can include only a top surface **302**, a front face **304**, and a second edge **310** formed by the distal end of the front face **304**, leaving an empty cavity behind the top surface **302** and the front face **304**.

In some embodiments, the angle of a plane defined by the front face **304** relative to planes defined by the top and bottom surfaces **302**, **306** can be different. In particular, the

angle between the plane defined by the front face **304** and the plane defined by the top surface **302** can be different from the angle between the plane defined by the front face **304** and the plane defined by the bottom surface **306**. Thus, the front face **304** can be oriented in a non-perpendicular manner relative to the top and bottom surface **302**, **306**. The angled orientation assists in providing an improved angle for customers to visualize the information provided on the labels **216**.

The top surface **302** of the shelf **300** can include two or more rows of apertures **312** formed therein (e.g., a first row **314**, a second row **316**, a third row **318**, or the like). Each of the rows **314**, **316**, **318** can be substantially parallel to the first edge **308** of the shelf **300** and substantially parallel relative to each other. In some embodiments, the apertures **312** can be configured in the shape of, e.g., a diamond, a circle, a square, a rectangle, a triangle, an oval, or the like. The apertures **312** in each of the rows **314**, **316**, **318** can be substantially aligned relative to each other.

During use, one or more labels **216** can be “sandwiched” between the first and second sheets **202**, **204** of the label track **200**. The label track **200** can be positioned against the front face **304** of the shelf **300**. The dimensions and substantially flat configuration of the label track **200** can conform to the substantially flat configuration of the front face **304** of the shelf **300**. In some embodiments, the rear edge **220** of the protrusion **218** of the label track **200** can be positioned against the bottom surface **306** of the shelf **300** such that the connection between the second sheet **204** and the protrusion **218** is positioned against the second edge **310** of the shelf **300**. The protrusion **218** can prevent the label track **200** from sliding upwards above the top surface **302** of the shelf **300**.

The distal end of the horizontal extension **150** of the locking mechanism **144** can be inserted into an aperture **312** of the third row **318** (e.g., the row furthest away from the first edge **308** of the shelf **300**). The locking mechanism **144** can be pushed into the aperture **312** until the inner corner **152** abuts an edge of the aperture **312**. The top portion **102** of the clip **100** can be pushed downward such that the bottom surface **146** of the clip **100** is positioned against the top surface **302** of the shelf **300**. Pushing the clip **100** downward can force the protrusions **162**, **164** of the locking mechanism **160** into an aperture **312** of the first row **312** (e.g., the row closest to the first edge **308** of the shelf **300**).

In particular, the protrusions **162**, **164** can flex towards each other and force can be imparted on the top portion **102** of the clip **100** to force the locking mechanism **160** into the aperture **312** beyond the protruding edges **182**, **184** of the locking mechanism **160**. Once the protruding edges **182**, **184** have passed through the aperture **312**, the protrusions **162**, **164** can expand to the normal position such that the protruding edges **182**, **184** extend beyond the edges of the aperture **312** and prevent the locking mechanism **160** from being pulled out of the aperture **312**. Thus, a snap fit of the locking mechanism **160** relative to the aperture **312** can be created to lock the top portion **102** of the clip **100** relative to the top surface **302** of the shelf **300**.

The intermediate portion **104** of the clip **100** can be positioned against the label track **200** such that the label track **200** is “sandwiched” between the front face **304** of the shelf **300** and the intermediate portion **104** of the clip **100** and the clip **100** retains the label track **200** in position with respect to the front face **304**. The bottom portion **106** of the clip **100** can be flexed to pass and snap around the second edge **310** of the shelf **300**. In some embodiments, a space or pocket can be formed between the rounded corner **142** of the

clip 100 and the label track 200 and/or the second edge 310 of the shelf 300. Snapping of the bottom portion 106 around the second edge 310 can secure the clip 100 to the bottom surface 306 and/or the second edge 310 of the shelf 300, thereby preventing the clip 100 from being disengaged from the shelf 300. In some embodiments, multiple clips 100 can be attached to the shelf 300 along the length 206 of the label track 200 to maintain the entire length 206 of the label track 200 secured to the shelf 300. The clip(s) 100 can therefore advantageously maintain the label track 200 secured to the front face 304 of the shelf 300 and the label track 200 can be removed only if the clip 100 is detached from the shelf 300 by reversing the attachment steps described above or, in some embodiments, by sliding the label track laterally along a length of the shelf.

FIG. 11 is a flowchart illustrating an exemplary process 400 of implementing the clip 100 during assembly with a label track 200 and a shelf 300. To begin, at step 402, clips can be provided. At step 404, an elongated label track can be positioned against a front face of the shelf. At step 406, a top portion of each of the clips can be secure to a top surface of the shelf. At step 408, an intermediate portion of each of the clips can be positioned over the elongated label track to retain the elongated label track against the front face of the shelf. At step 410, a bottom portion of each of the clips can be engaged with a bottom surface of the shelf to support the elongated label track. The clips can thereby be used to maintain the label track secured to the shelf.

While exemplary embodiments have been described herein, it is expressly noted that these embodiments should not be construed as limiting, but rather that additions and modifications to what is expressly described herein also are included within the scope of the invention. Moreover, it is to be understood that the features of the various embodiments described herein are not mutually exclusive and can exist in various combinations and permutations, even if such combinations or permutations are not made express herein, without departing from the spirit and scope of the invention.

The invention claimed is:

1. A system for securing an elongated label track to a shelf or base deck, the system comprising:

the shelf or base deck including a top surface, a front face and a bottom surface;

an elongated label track configured to be positioned against the front face of the shelf or base deck, the elongated label track having a track length and a track width; and

a plurality of clips, each of the plurality of clips including (i) a top portion having a first length extending from a first terminal end of the clip to a first transition portion, the top portion configured to secure to the top surface of the shelf or base deck, (ii) an intermediate portion having a second length extending from the first transition portion to a second transition portion, and (iii) a bottom portion having a third length extending from the second transition portion to a second terminal end of the clip, the bottom portion extending parallel to the top portion and defining an endpoint of the clip, the bottom portion configured to engage a bottom surface of the shelf or base deck and support the elongated label track;

wherein the track width of the elongated label track is dimensioned substantially equal to the second length of the intermediate portion and configured to be bounded by the first and second transition portions of the clip; and

wherein the intermediate portion extends at a first angle with respect to the top portion and a second angle with respect to the bottom portion, the first angle forming an interior angle that is an obtuse angle between 100° and 140°, and the second angle forming an interior angle that is an acute angle between 40° and 80°.

2. The system of claim 1, wherein when the plurality of clips are secured to the shelf or base deck, out of the top portion, the intermediate portion, and the bottom portion, only the intermediate portion of each of the plurality of clips is configured to sandwich the elongated label track against the shelf or base deck.

3. The system of claim 1, wherein the track length of the elongated label track is configured to extend beyond side portions of the clip.

4. The system of claim 1, wherein the shelf or base deck comprises two rows of apertures formed in the top surface, the two rows of apertures extending parallel to the front face of the shelf.

5. The system of claim 4, wherein the first terminal end of the top portion of each of the plurality of clips comprises a first locking mechanism configured to be positioned within an aperture of a first row of the two rows of apertures formed in the shelf or base deck.

6. The system of claim 5, wherein each of the plurality of clips comprises a second locking mechanism disposed between the first terminal end and the first transition portion, the second locking mechanism being configured to snap fit within an aperture of a second row of the two rows of apertures formed in the shelf or base deck to secure the clip to the shelf or base deck.

7. The system of claim 1, wherein the elongated label track comprises two plastic sheets connected relative to each other at a first edge extending the track length and defining an opening along a second edge extending the track length.

8. A method of securing an elongated label track to a shelf or base deck, the shelf or base deck including a top surface, a front face and a bottom surface, the elongated label track including a width and a length, the method comprising:

providing a plurality of clips, each of the plurality of clips

including (i) a top portion having a first length extending from a first terminal end of the clip to a first transition portion, the top portion configured to secure to the top surface of the shelf or base deck, (ii) an intermediate portion having a second length extending from the first transition portion to a second transition portion, and (iii) a bottom portion having a third length extending from the second transition portion to a second terminal end of the clip, the bottom portion extending parallel to the top portion and defining an endpoint of the clip, the bottom portion configured to engage the bottom surface of the shelf or base deck and support the elongated label track, wherein the intermediate portion extends at a first angle with respect to the top portion and a second angle with respect to the bottom portion, the first angle forming an interior angle that is an obtuse angle between 100° and 140°, and the second angle forming an interior angle that is an acute angle between 40° and 80°;

positioning an elongated label track against the front face of a shelf or base deck;

securing the top portion of each of the plurality of clips to the top surface of the shelf or base deck;

positioning the intermediate portion of each of the plurality of clips over the elongated label track; and

engaging the bottom portion of each of the plurality of clips to the bottom surface of the shelf or base deck to support the elongated label track, wherein the width of the elongated label track is dimensioned substantially equal to the second length of the intermediate portion and bounded by the first and second transition portions of the clip.

* * * * *